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3.— *Lives of the Engineers, with an Account of their principal Works; comprising also a History of Inland Communication in Britain.* By SAMUEL SMILES. With Portraits and numerous Illustrations. Vols. I. and II. London: John Murray. 1861. 8vo. pp. xvii. and 484, 502.

FROM our previous acquaintance with Mr. Smiles's writings we were inclined to look with interest for his new work, in the expectation of finding in it much that was both new and instructive, and these anticipations have been more than realized. The field of inquiry which he has marked out for himself has been comparatively neglected by other writers. Yet it possesses many attractive points, and no one could have been more successful than Mr. Smiles in bringing them out into a clear light. His knowledge of general literature is extensive and accurate; his industry is well-directed and persistent; and his style, without exhibiting much elegance or felicity of expression, is uniformly simple and perspicuous. The plan of his work, so far as it may be gathered from the two volumes now published, has been judiciously formed, and is skilfully elaborated. It includes a wide range of topics, each of which is of intrinsic interest or importance, and it affords ample scope for the exhibition of Mr. Smiles's uncommon skill as a biographer. His work cannot, indeed, possess so great a unity of interest as binds together Lord Campbell's "Lives of the Chancellors," or Dr. Hook's "Lives of the Archbishops of Canterbury"; but the common relation to the history of civil engineering in England which was borne by the different persons whose lives are narrated, gives to his biographies such a degree of unity as warrants their publication in a connected form.

The two volumes now before us are, we suppose, only an instalment of a rather voluminous work, though the writer's plan is nowhere distinctly stated. They are divided into eight parts of unequal length, of which three are of a general character, and may be regarded as almost purely introductory, while each of the others is confined to the life of some one person. The First Part is devoted to an account of the "Early Works of Embanking and Draining," and includes a description of the works undertaken for draining Romney Marsh and the Great Level of the Fens. The Second Part contains the "Life of Sir Hugh Myddelton," the once famous engineer of the New River Water-Works for supplying the city of London. The Third Part treats of the "Early Roads and Modes of Travelling" in England, and sketches the life of John Metcalf, a blind and self-taught engineer, who acquired considerable local reputation in his own day, and well deserves the honor Mr. Smiles awards him. To us this is in many respects the most attractive division of his work. The Fourth Part, which also comprises much curious and interesting matter, relates to the early "Bridges, Ferries, and Harbors." The last four Parts contain the Lives of James Brindley, whose name will be forever associated with the Duke of Bridgewater's Canal, of John Smeaton, the engineer of the Eddystone Lighthouse, of John Rennie, who constructed the Waterloo and London Bridges and the Plymouth Breakwater, and of Thomas Telford, one of the greatest engineers of this century, who built the suspension bridge over the Menai Strait, and was connected with many other important works. All of these topics, both general and special, Mr. Smiles has studied with a genuine love of his subject, and he has brought together much that would soon have perished, like all other traditional accounts, but which is well worth preserving. His volumes, we ought to add, are profusely illustrated with maps and plans from the magnificent ordnance surveys, and with other engravings.

In his Preface, Mr. Smiles gives some curious details as to the late growth of mechanical skill in England. One passage is so striking and suggestive, that we cannot refrain from quoting it at length, both as a fair specimen of his style, and on account of its intrinsic interest.

"Most of our modern branches of industry," he says, "were begun by foreigners, many of whom were driven by persecution to seek an asylum in England. Our first cloth-workers, silk-weavers, and lace-makers were French and Flemish refugees. The brothers Elers, Dutchmen, began the pottery manufacture; Spillman, a German, erected the first paper-mill at Dartford; and Boomen, a Dutchman, brought the first coach into England.

"When we wanted any skilled work done, we almost invariably sent for foreigners to do it. Our first ships were built by Danes or Genoese. When the Mary Rose sank at Spithead in 1545, Venetians were hired to raise her. On that occasion Peeter de Andreas was employed, assisted by his ship-carpenter and three of his sailors, with 'sixty English maryners to attend upon them.' When an engine was required to pump water from the Thames for the supply of London, Peter Morice, the Dutchman, was employed to erect it.

"Our first lessons in mechanical and civil engineering were principally obtained from Dutchmen, who supplied us with our first wind-mills, water-mills, and pumping-engines. Holland even sent us the necessary laborers to execute our first great works of drainage. The Great Level of the Fens was drained by Vermuyden, and another Dutchman, Freestone, was employed to reclaim the marsh near Wells, in Norfolk. Canvey Island, near the mouth of the Thames, was embanked by Joas Croppenburgh and his company of Dutch workmen. When a new haven was required at Yarmouth, Joas Johnson, the Dutch engineer, was employed to plan and construct the works; and when a serious breach occurred in the banks of the Witham, at Boston, Matthew Hake was sent for from Gravelines in Flanders; and he brought with him not only the mechanics, but the manufactured iron required for the work. The art of bridge-building had sunk so low in England about the middle of the last century, that we were under the necessity of employing the Swiss engineer Labelye to build Westminster Bridge."